

549,505

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number
WO 2004/083222 A1

(51) International Patent Classification⁷: **C07F 9/58**

(21) International Application Number:
PCT/CA2004/000384

(22) International Filing Date: 15 March 2004 (15.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/391,056 17 March 2003 (17.03.2003) US

(71) Applicant (for all designated States except US): **MEDICURE INC.** [CA/CA]; 4 - 1200 Waverley Street, Winnipeg, Manitoba R3T 0P4 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DIAKUR, James** [CA/CA]; 75 Winterhaven Drive, Winnipeg, Manitoba R2N 4L3 (CA). **HAQUE, Wasimul** [CA/CA]; 2220 Kaufman Way, Edmonton, Manitoba T6L 2Y7 (CA). **ZHANG, Wenlian** [CA/CA]; 335 - 99 Dalhousie Drive, Winnipeg, Manitoba R3T 3M2 (CA). **YAO, Junzhi** [CN/CA]; 312-99 Dalhousie Drive, Winnipeg, Manitoba R3T 3M2 (CA). **PHAM, Vinh** [CA/CA]; 43 Foyle Street, Winnipeg, Manitoba R2R 2C1 (CA).

(74) Agent: **RIDOUT & MAYBEE LLP**; One Queen Street East, Suite 2400, Toronto, Ontario M5C 3B1 (CA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL HETEROARYL PHOSPHONATES AS CARDIOPROTECTIVE AGENTS

(57) Abstract: This invention teaches a-substituted phosphonates, their preparation, pharmaceutical compositions thereof, biologically acceptable salts thereof, and methods for treating various disorders using such compositions.

WO 2004/083222 A1